

PETROV, F.M. (g.Abakan)

Physics problems on automobile data. Fiz. v shkole 15 no.6:78-79
N-D '55. (MIRA 9:2)
(Automobiles) (Physics--Problems, exercise, etc.)

Y. K. 1. 1.
BARSUKOV, M.I., kand.sel'skokhozyaystvennykh nauk; KIZYURIN, A.D., doktor
sel'skokhozyaystvennykh nauk; BORINSEVICH, V.A., kand.sel'skokhozyay-
stvennykh nauk; BORMUSOVA, S.M., agronom; VERMENICHAYA, M.D., kand.
sel'skokhozyaystvennykh nauk; ISOBELA, S.S., doktor biol. nauk,
sel'skokhozyaystvennykh nauk; KUBKIN, S.M.,
KOROKHOV, I.I., kand.sel'skokhozyaystvennykh nauk; KUCHKIN, V.A., agronom;
kand. veterinarnykh nauk; YELIKOVA, L.I., kand.sel'skokhozyaystven-
nykh nauk; KOTT, S.V., doktor biol. nauk; KUCHKINA, V.A., agronom;
LAKHIN, A.Z., doktor biol.nauk; LABEJEVA, Ye.M., agronom;
MALAKHOVSKIY, A.Ye., doktor sel'skokhozyaystvennykh nauk; MAYBORODA,
M.M., kand. sel'skokhozyaystvennykh nauk; MAYDANYUK, A.Z., zooteknik;
OVSYANNIKOV, G.Ye., kand.sel'skokhozyaystvennykh nauk; PATROV, P.A.,
kand.biolog.nauk; POGORLOV, P.F., agronom; POLKOSHNIKOV, M.G., dotsent;
REINARD, G.K., kand. sel'skokhozyaystvennykh nauk; KUCHKIN, V.N.,
prof.; SADYRIN, M.M., kand.sel'skokhozyaystvennykh nauk; TOBOL'SKIY,
V.Ya., vetvrach; TYAGULNIKOV, S.D., kand.sel'skokhozyaystvennykh
nauk; UKHIN, I.I., kand.sel'skokhozyaystvennykh nauk; FADOROV, I.V.,
kand.sel'skokhozyaystvennykh nauk; CHIRKOV, D.I., zooteknik;
TSINGOVATOV, V.A., prof. SHVETSOVA, A.M., kand.sel'skokhozyaystven-
nykh nauk; SHEVLYAGIN, A.I., kand.sel'skokhozyaystvennykh nauk;
SEMEHOVSKIY, A.A., red.; DOLUBINSKAYA, Ye.S., red.; RECHAYEVA, Ye.G.,
red.; PERESYPKINA, Z.D., tekhnicheskiy red.

[Siberian agronomist's reference manual] Spravochnaya kniga agronoma
Sibiri. Moskva, gos. izd-vo sel'skhoz. lit-ry, Vol.2. 1957. 339 p.
(Siberia--Agriculture) (MIRA 11:3)

AUTHOR: Petrov, V. A.
 TITLE: The Economic Efficiency of the Use of Fixtures
 Spetsial'nye
 PERIODICAL: Voprosy Ekonomiki, 1980, No. 1, p. 11-15, 16 refs. (USSR)

ABSTRACT: The use of fixtures in machine building is analyzed. The efficiency of the fixture is determined by the amount of work achieved, which is predicted by a mathematical model. A standard formula is given for the calculation of the cost of the fixture. The cost of the fixture is expressed in Eq. (1). The cost factor which is added to the cost of the fixture is a constant factor and the number of fixtures is determined by the fixture. Six groups, each with a different range of values of the standard components, are defined and the constant and variable factors in the fixture cost formula are stated in Table 1 for each group. Other formulae for the calculation of the fixture cost and the minimum number of fixtures are given. A diagram is reproduced showing the relationship between the fixture cost and the permissible cost of the fixture. There are 1 figure, 1 table, and 3 Russian references.

AVAILABLE: Library
 Card 1/1

1. The

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5. Monthly List of

PETROV, F.M. (Abakan).

Demonstration of the second law of dynamics. Fiz. v shkole 13 no.3:66 My-
Je '53. (MLRA 5:5)

(Dynamics--Experiments)

PIETROV, I. N.

NEMCHENKO, V.S.; BOCHAROV, M.D.; KRISTOSTUR'YAN, N.G.; CHERKASOV, V.I.;
ANDREYANOV, V.V.; KAUFMAN, V.M.; PAKHMANOV, V.P.; ZVORYKIN, A.A.,
otv.red.; ANICHKOV, M.N., red.; BARDIN, I.P., red.; BLAZHENYEV,
A.A., red.; VVEDENSKIY, B.A., red.; PRIGOR'YEV, A.A., red.;
KAPUSTINSKIY, A.P., red.; KOLMOGOROV, A.N., red.; MIKHAYLOV, A.A.,
red.; OPARIN, A.I., red.; PETROV, P.M., red.; STOLETOV, V.N., red.;
STRAKHOV, N.M., red.; FIGUROVSKIY, N.A., red.; KOSTI, S.D., tekhn.red.

[Biographical dictionary of leaders in the natural sciences and
technology] Biograficheskii slovar' deiatelei estestvoznaniia
i tekhniki. Vol.1. A - L. Otvetstvennyi red. A.A.Zvorykin. Red.
kollegiia: M.N.Anichkov i dr. Moskva, Gos.nauchn.izd-vo "Bol'shaia
Sovetskaiia Entsiklopediia." 1958. 548 p. (MIRA 12:4)

1. Redaktsiia istorii estestvoznaniia i tekhniki Bol'shoy Sovetskoy
Entsiklopedii (for Nemchenko, Bocharov, Kristostur'yan, Cherkasov,
Andreyanov, Kaufman, Pakhmanov).
(Scientists)

PETROV, F.M., professor

Great goal. Zdorov'e 3 no.9:10-11 S '57.
(PETROV, FEDOR NIKOLAEVICH, 1876-)

(MLPA 10:9)

PETROV, F.N., professor.

The cultural and political center of the U.S.S.R. Nauka i zhizn'
no. 9:2-10 S '47. (Mide 7 5)

(Moscow)

USSR / Human and Animal Physiology. Neuro-muscular Physiology.

T-3

Abs Jour : Ref Zhur - Biologiya, No 1, 1959, No. 3735

Author : Petrov, F. P.

Inst : Institute of Physiology, AS USSR

Title : Study on the Electrotonic Removal of Pessima

Orig Pub : Tr. in-ta fiziol. AN SSSR, 1957, 6, 94-99

Abstract : Tests were carried out on the neuro-muscular apparatus of the frog. The sciatic nerve was stimulated by an induction current or by application of NaCl crystals. To obtain pessima, first the stimulation threshold was established, and then the secondary coil was placed at a distance of 10 - 12 cm from the primary coil and an induction current was switched on for a long period. The near-threshold muscular effects, caused by stimulation of the nerve at the muscle, increased by an ascending and decreased (or disappeared) by a descending constant.

Card 1/3

USSR / Human and Animal Physiology. Neuro-muscular Physiology.

I-9

Abs Jour : Ref Zhur - Biologiya, No 1, 1959, No. 3735

current. When the nerve was stimulated in its middle part or at the region of the spine, a reverse picture was obtained. Some time after the NaCl crystals were placed on the nerve near the muscle, turning on of the ascending constant current produced tetanic muscular contractions, while the descending current led to the decrease or complete suppression of them. When KCl was placed upon the middle and proximal sectors of the nerve, phenomena of the opposite nature were noted. Consequently, the results were identical by stimulation of the various sectors of the nerve by a near-threshold induction current, and by stimulation with KCl. The effect of a constant current directly upon the muscle was considerably weaker than its effect on the nerve trunk. When the distal end of the nerve was stimulated, electronic phenomena were observed, and when the middle

Card 2/3

62

USSR / Human and Animal Physiology. Neuro-muscular Physiology.

7-9

Abs Jour : Ref Zhur - Biologiya, No 1, 1959, No. 3735

part or the proximal end of the nerve were irritated. perielectronic appearances took place. Pessima was eliminated by constant currents of that direction by which near-threshold muscular contractions were suppressed. Elimination of pessima on the whole was probably not due to the effect of the constant current on muscle and end plates, but to the electrotonic and peri-electrotonic effects of the current on the nerve. --
F. I. Mumladze

Card 3/3

KOCHEKOV, Viktor Terent'evich; PLOTNIK, Anatol'iy Mikhaylovich;
KOROTKOV, Valentin Mikhaylovich. Primeneniye uchast'ya
KARA'YEV, Nikolai Pavlovich; KARA'YEV, Nikolai Pavlovich;
reissendat; KARA'YEV, Nikolai Pavlovich.

Theory of remote control and guidance of rockets.
Teoriya dalekogo upravleniya i vedeniya raket. Voz-
dukh, izd-vo "Mashin." 1964. 160 p. (M.A. 1964)

L 4326-2 LEO-2/FSS-2/EWT(1)/EWT(2)/EWX(d)/EWA/EED-2/FCS(1)/EW(h)

0401468

BOOK EXPLOITATION

UR/

40
B+1

Petrov, F. V. (Colonel, Compiler)

Nuclear weapons; physical foundations (Yadernoye oruzhiye; fizicheskiye osnovy)
Moscow, Voenizdat M-va obor. SSSR, 1965. 108 p. illus., biblio. 20,000 copies
printed.

TOPIC TAGS: nuclear weapon, shock wave, light radiation, radiation sickness,
radiation dosimeter, radioactivity, nuclear safety, nucleus

PURPOSE AND COVERAGE: The book consists of articles about nuclear weapons published
in the periodical "Tekhnika i vooruzheniye" (Technology and Armament). The physical
foundations of nuclear weapons and general problems of protection against them are
considered in the articles.

TABLE OF CONTENTS:

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L 48261-65

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Ch. V. Light radiation - - 57
Ch. VI. Penetrating radiation - - 68
Ch. VII. Radiation poisoning - - 83
Ch. VIII. Methods of radiation dosimetry - - 96
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SUB CODE: NP

SUBMITTED: 07Jan65

NO REF SOV: 005

OTHER: 002

TP
Card 2/2

PETROV, F.V., polkovnik (MAJ.).

(Nuclear weapons) (g. a. 1948) (Soviet Union)
zichenskye osnovy. Moskva: Voenizdat.

L 15611-66 EWT(m)/ENP(j) WW/RM

ACC NR: AP6008207

SOURCE CODE: BU/0011/65/018/004/0331/0334

AUTHOR: Kirilov, M.; Petrov, G.

ORG: Faculty of Chemistry, Sofia University, Sofia

TITLE: Acylation of diethyl ester of the nitrile of phosphonium acetic acid

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 18, no. 4, 1965, 331-334

TOPIC TAGS: chemical reaction, ester, organic nitrile compound, organic phosphorus compound, acetate

ABSTRACT: The properties and reaction capabilities of the ester of the phosphonium acetic acid and the esters of the nitrile of phosphonium acetic acid are little known. Consequently, the authors present in details the process and results of the acylation of the diethyl ester of the nitrile of phosphonium acetic acid. The resulting diethyl esters are colorless liquids and, with the exception of the benzoyl derivative, they are stable in storage. The paper was submitted by B. Kurtev, Corresponding Member Bulgarian Academy of Sciences, 30 November 1964. Orig. art. has 4 figures and 1 table. JPRS/

SUB CODE: 07 / SUBM DATE: none / ORIG REF: 001 / OTH REF: 003 / SOV REF: 003

1/1

PETROV, G.; GEORGIEV, S.I.; ILIEVA, V.; BUNDZHULOV, V.; STOICHEV, L.
STAMATOV, G.

Graphic method for the selection of reducers. Godishnik mash elekt
10 no.1:59-68 '61 (publ. '62).

PETROV, G.; GEORGIEV, Sl.; ILIEVA, V.; BUNDZHULOV, V.; STOICHEV, L.;
KODZHANSKA, N.; MALINOV, N.; CHORBADZHIEV, D.; STOILANOV, St.;
STOEV, G.; STAMATOV, G.

Graphic method for the computation of cylindrical vessels under
external and internal pressure. Godishnik mash elekt 10 no.1:81-
93 '61 (publ. '62).

PETROV, G.; GEORGIEV, Sl.; ILIEVA, V.; BUNDZHULOV, V.; STOICHEV, L.;
MALINOV, N.; STAMATOV, G.

Graphic method for the computation of conveyors with rubber-
textile bands. Godishnik mash elekt 10 no.1:69-80 '61 (publ. '62).

PETROV, G.

Bulgaria

[Academic Degrees]

[Affiliation] Chief doctor of the Sofia city SES

[Source] Sofia, Khigiena, No 5, Sep-Oct 1962, pp 25-32.

[Data] "Ten Years Sanitarian-antiepidemic Measures in Sofia."

VERBEV, P.; ZHELIAZKOV, S.; GUBEV, E.; MONEV, V.; PETROV, G.; KHADZHIKOLEVA, Khr.,

Influenza in Sofia in 1959. Nauch. tr. vissh. med. inst. Sofia 40
no.2:55-77 '61.

1. Predstavena ot prof. P. Verbev, rukovoditel na Katedrata po epidemiologia i infektiozni bolesti.

(INFLUENZA epidemiol)

PETROV, G. [Petrov, H.]

"Illustrated catalog of standard designs for rural construction."
Reviewed by H.Petrov. Sill'. bud. 7 no.4:24 Ap '57.

(MIRA 12:11)

(Farm buildings)

PETROV, G.

Urgent requirements for supplying materials and equipment to
oil regions of the Tatar A.S.S.R. Neftianik 2 no.5:25-27 My '57.
(MLRA 10:5)

1. Upravlyayushchiy trestom Tattekhnabneft'.
(Tatar A.S.S.R.--Petroleum industry--Equipment and supplies)

PETROV, G.

Ready under any conditions. ...
(Ministerstvo nezamestnanih. Sofia. Vol. 11, p. 1,
June 1966)

1418000
"Resins for Pressure Molding Harden More Rapidly," by Prof
G. Petrov, Doctor of Technical Sciences, Promyshlennno-Eko-
nomicheskaya Gazeta, No 18, 10 Feb 57

"How can one improve the properties of novolac resins used for the
manufacture of various pressure-molded products?

"An answer to this question is being sought by a group of workers
at the Chair of Plastics, Moscow Chemicotechnological Institute imeni
Mendeleev, and at the Scientific Research Institute of Plastics.

"It has been proposed to treat novolac resins with hydrogen peroxide
or with oxygen of the air. Oxidizing agents improve the mechanical and
dielectric properties of the resins and increase their adhesion to fillers.
Tests on resins treated in this manner have been conducted at the Kara-
charovsk Plastics Plant. They have shown that the method described is
of advantage. Use of pressure-molding powders containing novolac resins
treated with hydrogen peroxide has shown that technical products prepared
from such powder harden 20-30% more rapidly than objects made of ordinary
novolac powder.

"A 15-20% saving of novolac resin is achieved in the production of
shell molds for metal casting. Hardening of the shell molds made with
novolac resins [treated by the new method] takes place in 42 seconds,
while the hardening of shell cores produced with the aid of [ordinary]
bakelite powder takes 68 seconds

5.111.3-5
"We succeeded in preparing novolac resins by the direct oxidation
of phenol without the use of aldehydes."

PETROV, G., doktor tekhnicheskikh nauk; PEVZNER, L., kandidat tekhnicheskikh nauk; DORONENKOV, I., inzhener; YEZERSKIY, A., inzhener.

Facing slabs made of phenolite. Stroimaterialy, izdelaniya konstruktsii 2
no. 5-33-34 My '56. (MLRA 9:8)
(Floors) (Walls)

Petrov, G

KOLOVOYTSEV, V., kandidat tekhnicheskikh nauk; PETROV, G., inzhener

Effect of certain structure characteristics in ships on the
cost of loading and unloading operations. Mor.flot 15

no:5:5-8 My'55.

(MLRA 8:6)

(Naval architecture) (Loading and unloading)

Petrov, G. On conditions for construction of a triangle.
Časopis Pěst. Mat. 77, 77-92 (1952). (Czech)

If a, b, c are the sides of a triangle, and u_a the bisector of the angle opposite the side a , we have the known relation

$$u_a^2(b+c)^2 = bc[(b+c)^2 - a^2].$$

The author denotes a, u_a, b, c by x, y, z, t , and considers (x, y, z, t) as the rectangular homogeneous coordinates of a point in an extended three-dimensional Euclidean space. A discussion of the surface

$$f(x, y, z, t) = y^2(z+t)^2 - x^2[(z+t)^2 - a^2] = 0$$

together with the inequalities

$$x+z-t > 0, \quad x-z+t > 0, \quad -x+z+t > 0$$

yields a necessary and sufficient condition for the existence of a triangle when a, b, u_a are given. This method of analysis is applied to a considerable number of similar problems involving medians, altitudes, the circumradius, the inradius, and combinations of these elements.

N. A. Court.

working of certain mining and electric power apparatus,
and determining basic parameters of the feeder used in
injecting ammonia liquor into the soil. Inv. report no. 1840
step 3/N no. 2:1-3' inv.

PETROV, G.

New equipment standards for food serving enterprises. Obshchestv.
pit. no. 11:39-42 N '62. (MIRA 16:1)

1. Rukovoditel' sektora ekonomicheskikh issledovaniy
oborudovaniya Nauchno-issledovatel'skogo instituta trgovli i
obshchestvennogo pitaniya.
(Restaurants, lunchrooms, etc.--Equipment and supplies)

PETROV, G. podpolkovnik

Deck aviation of the U.S. Navy. Av. i kosm. 45 no. 5:91-94 My '83.

(MIA 1983)

(United States—Airplane carriers)

MIROCHNIK, F., sanitarnyy vrach; PETROV, G.

Sanitary and technical requirements of vending machines.
Sov. torg. 36 no.1:51 Ja '63. (MIRA 16:2)

1. Moskovskaya gorodskaya sanitarno-epidemiologicheskaya
stantsiya (for Mirochnik). 2. Nauchno-issledovatel'skiy
institut trgovli i obshchestvennogo pitaniya (for Petrov).
(Vending machines)

PETROV, G., serzhant

A word about staging period trainers. Starsh.-serzh. no.6:11 Je '62.
(Military education) (MIRA 15:7)

VERBEV, P.; ZHELIAZKOV, S.; GUBEV, E.; MONEV, V.; PETROV, G.;
KHADZHIKOLEVA, Khr.

Influenza in Sofia during 1959. Suvrem med., Sofia no.2:31-36 '61.

1. Katedra po epidemiologija i infeksiozni bolesti pri Visshia
meditsinski institut, Sofia. (Rukov. na katedrata prof. P. Verbev.)

(INFLUENZA statist)

S4029/6001001000
B013/816

and by some
the earth from space a

Card 1

PETROV, G., inzh.

All-purpose plantering gauge. Stroitel' no.1:22 Ja '60.

(MIRA 13:5)

(Plastering)

etrev, 12.

increment of the user on time railroad station is proportional to the time
of travel.

"*ibid.*, citata, *Chiraria*, vol. II, n. 6, 1908.

Monthly List of East European Accessions (LHA) 1B, Vol. , no. 1, 1947 -Oct.
Uncl.

PETROV, I. A.

PETROV, I. A.: "Color in the architecture of cities." Moscow Architectural Inst.
Moscow, 1956. (Dissertation for the Degree of Candidate in Architectural
Science.)

Knizhnaya Letopis'
No 32, 1956. Moscow.

FILIMONOV, Yu.I.; PETROV, G.A.

Use of pulse ionization chamber for studying angular γ - γ correlations. Izv.AN SSSR.Ser.fiz.20 no.12:1434-1437 D '56.

(MIRA 10:1)

1. Leningradskiy fiziko-tekhnicheskii institut Akademii nauk SSSR.
(Ionization chambers)

SOV/169-59-4-455

Translation from Referativnyy zhurnal, Geofizika, 1959, Nr 5, p 41 USSR

AUTHORS Vesnev, A.V., Rukin, A.F., Petrov, I.A.

TITLE A New Device for Electric Prospecting by Direct Current

PERIODICAL Tr Vses. n.-i. in-ta metodiki i tekhn. razvedki, 1959, Nr 5, pp 145 - 160

ABSTRACT An electronic-needle compensator ESK-1 and a computing compensator KSR for electric prospecting by direct current are described, which are developed by the Institute for Science of Machines and Automation of the AG USSR and produced by the plant "Geologorazvedka". The devices function on the principle of auto-compensation realized by means of an amplifier of direct current with transformation. The principal circuits of ESK-1 and KSR are presented and the main characteristics, the description of the device, and the methods of handling the latter are given. A note on the development of a third device is added, which is an electronic automatic compensator designed for the separate registration of a film of the quantities ΔU and I . Field tests of the ESK-1.

Card 1/2

SOV/189-19-1-4-1

A New Device for Electric Prospecting by Direct Current

KSR, and EAK yielded positive results. The accuracy of measurements with electronic devices is somewhat higher than that of a potentiometer, and the performance increases even in relatively simple conditions by 1.4 - 1.5 times. In regions with industrial disturbances, the electronic devices have no advantages in comparison to the potentiometer. The introduction of the devices into the practice is recommended.

A. A. Stitskov

and 2 2

PHASE I BOOK EXPLOITATION

SOV/4059

Veshev A. V. , L. Ya. Mityuk, G. A. Petrov, A. P. Pokin, and A. N. Chir'yev

Elektronnaya elektrorazvedochnaya apparatura ESK-1 , KSR-1 i KSRM-1 (ESK-1, KSR-1, and KSRM-1 Electronic Equipment for Electrical Prospecting) Moscow, Geogeoltekhizdat, 1959. 103 p. Errata slip inserted. 4,000 copies printed.

Sponsoring Agencies: Vsesoyuznyy nauchno-issledovatel'skiy institut metodiki i tekhniki razvedki; USSR Ministerstvo geologii i okhrany nedr.

Ed. of Publishing House: V. T. Korchagin; Tech Ed.: V. V. Bykova.

PURPOSE: This textbook is intended for geophysicists, field geologists, and persons engaged in geological exploration.

COVERAGE: The book describes new electronic equipment manufactured for electrical prospecting by the use of direct current. The book also describes principles of operation, construction, and efficiency tests performed under both field and laboratory conditions. The book also gives directions for using the instruments, and lists possible causes of trouble, along with methods of

Card 1/5

ESK-1, KSR-1, and KSRM-1 Electronic Equipment (Cont.)

SOV/4059

eliminating them. The basic diagrams and first models of the equipment were developed by the Institute of Science of Machines and Automation, Academy of Sciences, Ukr SSR, in cooperation with the electrical prospecting laboratory of the VIERG (VITR). Field tests of the equipment were carried out jointly by the above-mentioned laboratory and the IMA AN Ukr SSR. Production models of the apparatus were developed in the OKB of the Ministry of Geology and Conservation of Mineral Resources, USSR. The following persons participated in the development of the electrical prospecting equipment: A.V. Veshev, V.G. Zubov, K.B. Karandeyev, L.Ya. Mizyuk, G.A. Petrov, E.P. Sogolovskiy, A.A. Flaksman, A.P. Pokin, G.A. Shtamberger, A.N. Chir'yev, and L.M. Jaffe. In writing this textbook, the following persons participated on behalf of the OKB MGION: A.N. Chir'yev and G.A. Petrov; on behalf of the IMA AN Ukr SSR: L.Ya. Mizyuk, V.G. Zubov; on behalf of VITR: A.V. Veshev, L.V. Larionov, and A.P. Pokin. General editing was done by A.V. Veshev. There are 15 references: 12 Soviet, 1 Swedish, 1 English, and 1 French.

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ESK-1, and KSRM-1 Electronic Equipment (Cont.)

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Card 4/5

LITVINOV, L A ; PETROV, G. A.

Reconditioning worn-out ramps. Maslin stroitel no. 5:
14 My '64. (MIRA 17:7)

PETROV, G.A.

Using tabulating machines in developing the accounting of materials.
[Izd.] LONITOMASH 44:102-109 1988. (MIRA 11:6)
(Machine accounting)

BAKHODIIN, M.D., kandidat tekhnicheskikh nauk; PETROV, G.A., inzhener

Selecting parameters for new railroad motorcars. Tekh.zhel.dor
6 no.7:1-5 J1'47. (MIRA 8:11)
(Railroads--Rolling stock)

PETROV, G. A. and KRONFELD, I. V.

Basic Data and Characteristics of the USSR's Interplanetary Station "Soyuz"
dannyye i kharakteristiki interplanetyarnoy stantsii "Soyuz" / G. A. Petrov, I. V. Kronfeld.
Transzheldorizdat, 1964. 31 p.

PETROV, G.A., inzhener.

Rapid acting cut-out switch for railroad motorcars. Trudy
TSNI MPS no.123:5-12 '56. (MLA 9:12)

(Railroad motorcars) (Electric cutouts)

32(3)

SOV/112-59-3-5113

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 3, p 116 (USSR)

AUTHOR: Rubchinskiy, Z. M., and Petrov, G. A.

TITLE: Electric Braking of Motive-Power Units
(Elektricheskoye tormozheniye motorvagonnykh sektsiy)

PERIODICAL: Elektr. i teplovozn. tyaga, 1958, Nr 1, pp 7-10

ABSTRACT: Distinctive features of a new system of regenerative-rheostatic braking lie in the use of four traction motors connected in series with 750-v on the commutator. The traction motors have three steps of field weakening (60, 27, and 20%). Independent excitation is provided for the speed range over 45 km/hr, self-excitation is used at lower speeds. Experimental motive-power units have a counter-compound-field exciter that ensures stability of operation of the regenerative-rheostatic braking system. To compensate for the transformer action of the exciter series field winding on the separate-excitation winding supplied by the control circuit, the exciter field winding is connected in

Card 1/3

SOV/112-59-3-5113

Electric Braking of Motive-Power Units

series with a stabilizing-transformer secondary. The transformer primary is connected in series with the series-field winding. Braking process starts with the separate excitation of the motors; the rheostatic braking system functions up to the armature voltages close to the contact-line voltage. Thereupon, the system is automatically switched over to the regenerative braking which lasts up to 45 km/hr, after which the system again is automatically switched over to the rheostatic braking but with self-excitation of the traction motors. Function of various elements of the motive-power unit is described. It is noted that, with aid of the electropneumatic brakes on trailers, the train can be brought to full stop. Tests showed that switching from rheostatic braking to the regenerative and vice versa takes place without large bumps of current or sharp fluctuations of braking effort. Regenerative-rheostatic braking ensures a smoother train-stopping than pneumatic braking. In the course of investigations of the new braking system, a new short-circuit protection and a new anti-spinning system

Card 2/3

SOV/112 59-3-5113

Electric Braking of Motive Power Units

were tested. Electric energy return with the regenerative braking amounts to 20-30% depending on the section length. It is mentioned that in 1958, an experimental type ER train will be built, the train will be equipped with regenerative rheostatic braking and will be designed for a maximum speed of 130 km/hr

L. A. Ch.

Card 3/3

ROZENTAL', Y.I.; VESELOVSKIY, V.I. (Moscow); Prinsipal uchastiye: PETROV, G.A.

Kinetics of electrochemical oxidation and reduction of H_2 , O_2 , and
oxyhydrogen gas on a platinum electrode in electrolyte solutions.
Zhur.fiz.khim. 35 no.10:2256-2264 0 '61. (MIRA 14:11)

1. Fiziko-khimicheskiy institut imeni L.Ya.karpova.
(Hydrogen) (Oxygen) (Oxidation, Electrolytic)
(Reduction, Electrolytic)

L 22174-65 EWT(m) DIAAF

ACCESSION NR: AP5001826

8/0056/64/047/006/2064/2066

AUTHOR: Petrov, G. A.

19
TITLE: Angular distribution of Gamma quanta in the fission of U-235, U-233, and Pu-239 by thermal neutrons

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 6, 1964, 2064-2066

TOPIC TAGS: nuclear fission, angular distribution, fission gamma quanta, uranium, plutonium, thermal neutron fission, fission fragment

ABSTRACT: This is a continuation of a previous paper (Atomnaya energiya v. 18, 1965), where it was shown that the probability of emission of energetic γ rays accompanying the fission of U^{235} , U^{233} , and Pu^{239} is 12--14% higher in the direction of emission of the fission fragments than in the perpendicular direction. In the

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L 22174-65

ACCESSION NR: AP5001826

present work the authors studied the form of the γ -ray correlation function above 200 keV and found it to be the same as described in the previous paper. The fission fragments were counted by a gold-silicon np semiconductor detector, and the γ rays by a 40 x 60 mm NaI(Tl) crystal and an FEU-13 photomultiplier. The values obtained for the relative γ -ray yields at 9 angles were analyzed by the method of least squares for a function of the type

$$W(\theta) = 1 + A_2 P_2(\cos \theta) + A_4 P_4(\cos \theta)$$

(θ -- angle). The final correlation functions obtained after correction for the finite solid angle of the fragment detector were

$$U_{236} : W(\theta) = 1 + (0.076 \pm 0.007) P_2(\cos \theta) - (0.008 \pm 0.008) P_4(\cos \theta),$$

$$U_{235} : W(\theta) = 1 + (0.079 \pm 0.007) P_2(\cos \theta) + (0.004 \pm 0.008) P_4(\cos \theta),$$

$$P_{236} : W(\theta) = 1 + (0.089 \pm 0.007) P_2(\cos \theta) - (0.013 \pm 0.008) P_4(\cos \theta).$$

and the values of the anisotropy defined as

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ACCESSION NR: AP5001826

$$A = \left(\frac{1 + A_2 + A_4}{1 - A_2/2 + 3A_4/8} - 1 \right) \cdot 100\%$$

were (11 ± 1) , (13 ± 1) , and $(16 \pm 1)\%$, respectively, for U^{235} , U^{233} , and Pu^{239} , respectively, in good agreement with the earlier measurements and with data obtained by others. The multipolarity of the fission γ rays is deduced to be not higher than quadrupole. Orig. art. has: 1 figure and 1 formula.

ASSOCIATION: Fiziko-tehnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR (Physicotechnical Institute, Academy of Sciences SSSR)

SUBMITTED: 26May64

ENCL: 00

SUB CODE: NP

NR REF SOV: 004

OTHER: 002

Card 3/3

.; ARANOV, I. A.; PROTOPOPOV, A. N.; PETROV, G. A.

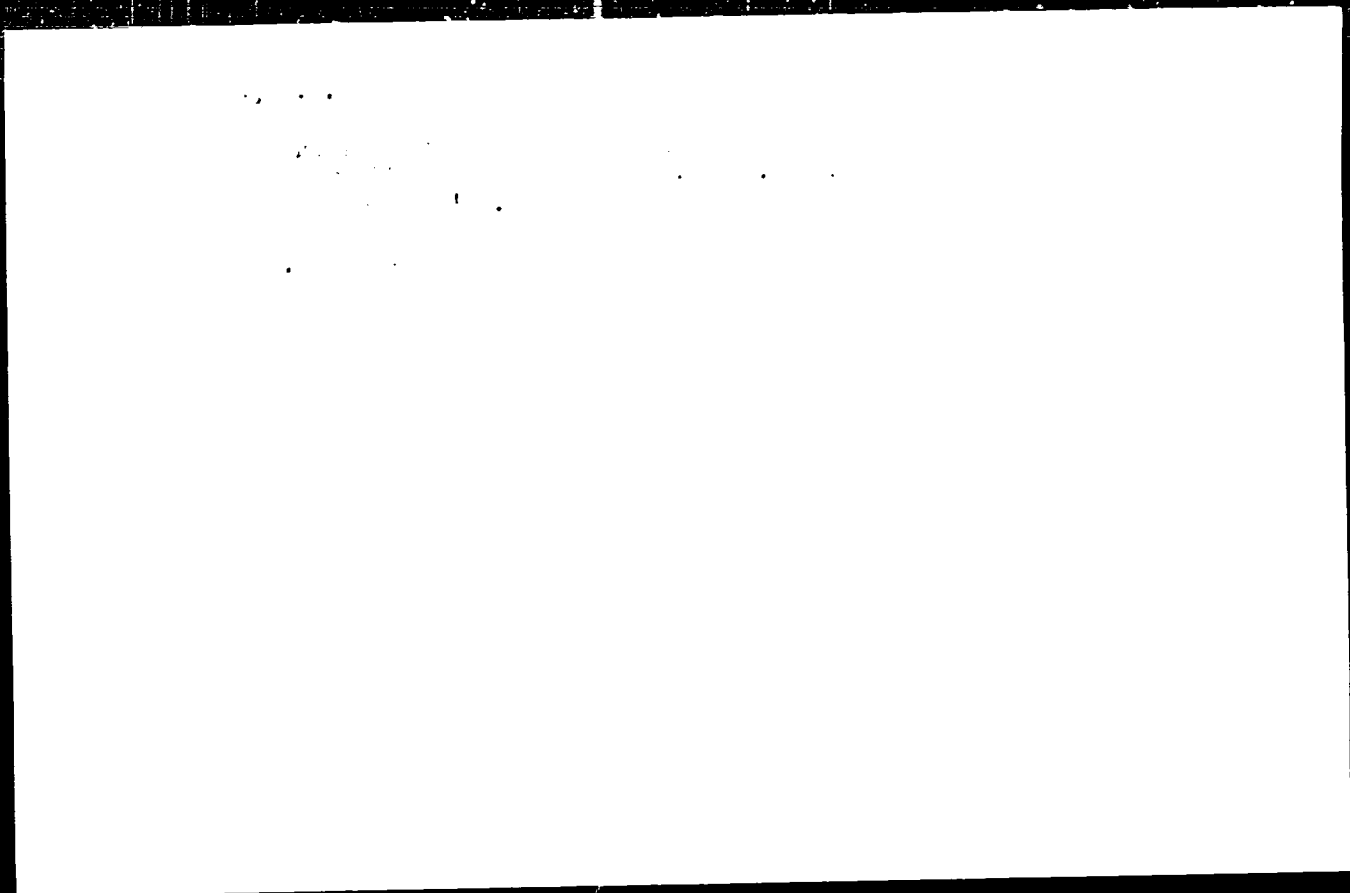
Some Special Features of the Recording of Alpha Particles and Fission
Fragments by Surface-Barrier Silicon Counters."

Report submitted for All-Union Conf on Nuclear Spectroscopy, Leningrad, 1964.
Feb 64.

Radiyevyy Institut (Radium Inst)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420013-4



APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420013-4"

VAL'SKIY, G.V.; KAMENKIN, L.M.; PETROV, G.A.; POPKOV, I.I.

Times of emission of gamma quanta in fission. Atom. energ. no. 3:223-226 1968.

L 48127-65 B4(m) Feb
ACCESSION NR: AP5011218

UR/0367/65/001/003/0476/0478

AUTHOR: Patroy, G. A.

TITLE: The effect of energy on the angular anisotropy of gamma radiation accompanying the fission of U^{235}

SOURCE: Yadernaya fizika, v. 1, no. 3, 1965, 476-478

TOPIC TAGS: nuclear physics, isotope, nuclear fission, radioactivity, gamma radiation, anisotropy

ABSTRACT: The effect of photon energy on the angular anisotropy of photon emission in the fission of U^{235} by thermal neutrons was determined on the basis of the measured γ -spectra for the case where the angles between gamma quantum and fission fragment registration are 0 and 90°. The γ -spectra were measured in the 0.1-1.3 Mev and 0.3-4.5 Mev energy intervals using a total absorption scintillation spectrometer. Precautions were taken to eliminate causes of spurious results. In the lower energy region, the spectra showed almost no variation, while in the higher region there was an increase of 10-15% in the number of pulses registered for 0° for the same fission. It was found that γ -quanta with energies greater than 1.5-1.7

Card 1/2

L 48127-65

ACCESSION NR: AP5011218

MeV are, within limits of experimental error, emitted isotropically. In the .25-.0.75 MeV region the anisotropy is greater than in the neighboring regions. The integral value of the anisotropy in the 0.3-4.5 MeV γ -quanta energy interval is $12.7 \pm .6\%$ and in the lower interval it is $15.3 \pm 0.5\%$ which agrees fairly well with experimental data. This supports the assumption that the anisotropic part of the γ -radiation in the fission process is caused by transitions, chiefly between low lying levels of the fragment-nucleus, the direction of whose angular momentum is correlated with the direction of the flight of the fragment. "In conclusion, the author takes the opportunity to express his gratitude to D. M. Kaminker for his interest in the work and his valuable discussions, to A. I. Yegorov for preparing the samples and to E. E. Rodzavich and B. D. Yurchenko for help in making the measurements." Orig. art. has 2 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe (Akademiya Nauk SSSR) (Physics-Technical Institute, Academy of Sciences SSSR)

SUBMITTED: 1965

EXCH: 00

AND CODE: NP

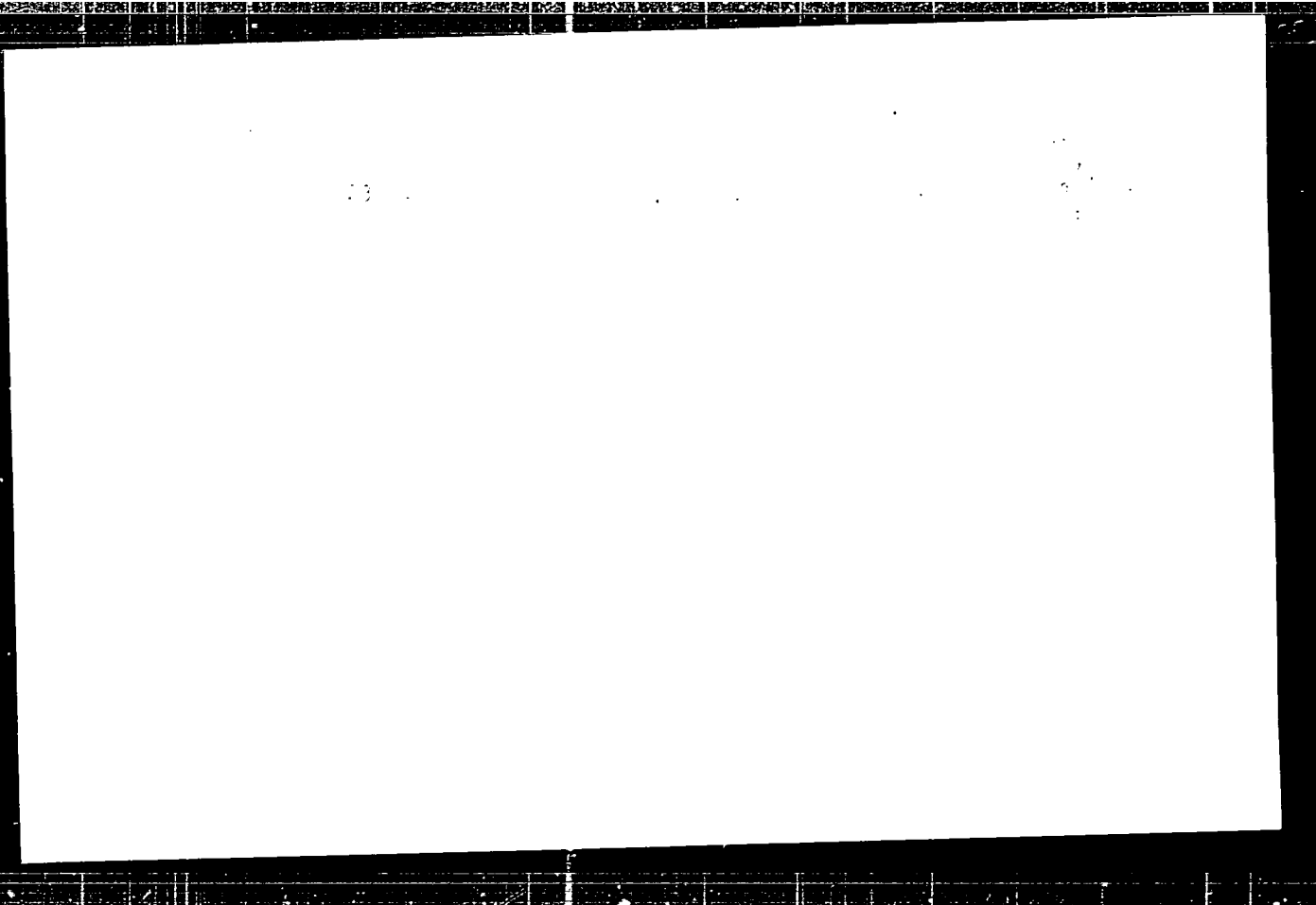
NOT REC. BY: 108

OTHER: 000

Card 2/2

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420013-4



APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420013-4"

PETROV, G.A.

Energy dependence of the angular anisotropy of gamma radiation accompanying U^{235} fission. Izv. fiz. 1 no.3:476-478 Apr 1965. (SIRA 18:5)

1. Fiziko-tekhnicheskiy institut im. A.F.Ioffe AN SSSR.

L 45577-65 EWT(m)/EPF(n)-2/EWP(t)/EWP(b)/EWA(h) Peb/Pu-4 LJP(c) JD/WW/JG/DM

ACCESSION NR: AP5009110

S/0089/65/018/003/0223/0226

AUTHOR: Val'skiy, G. V.; Kaminker, D. M.; Petrov, G. A.; Popoko, L. A.

TITLE: Fission Gamma-quantum emission times

SOURCE: Atomaya energiya, v. 18, no. 3, 1965, 223-226

TOPIC TAGS: uranium fission, thermal neutron fission, fission fragment, Gamma emission time

ABSTRACT: In view of the discrepancies in the results of investigations of the lifetimes of excited states of fission fragments, the authors attempted a direct estimate of the moving fragments by a geometrical separation method analogous to that used to determine the lifetimes of excited states of products of nuclear reactions. The experimental set-up is illustrated in Fig. 1 of the Enclosure. The fissoring U^{235} oxide was a layer of density of $100 \mu\text{g}/\text{cm}^2$ on a metallized polyvinyl chloride acetate film. The fission fragments were counted with a silicon detector and the quanta with an NaI(Tl) scintillation counter. The coincidences between the fragments and the quanta were recorded as a function of the distance from the collimator axis to the target. Unlike data obtained in earlier investigations it is concluded

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L 45577-65

ACCESSION NR: AP5009110

that the bulk of the radiation is emitted within 5×10^{-11} sec following the fission. Not more than 5--10% of the radiation accompanying the fission is produced in the interval 3×10^{-10} -- 2×10^{-8} sec. Orig. article has: 3 figures.

ASSOCIATION: None

SUBMITTED: 26Feb64

ENCL: 01

SUB CODE: NP

NR REF SOV: 002

OOTHER: 003

Card 2/4

L 5069-66 EWT(m)/EWA(h) DM

ACC NR: AP5022641

UR/0089/65/019/002/0186/0188 32
539.173 28
8

AUTHOR: Popeko, L. A.; Val'skiy, G. V.; Kaminker, D. M.; Petrov, G. A.

TITLE: Delayed gamma radiation in U235 fission

SOURCE: Atomnaya energiya, v. 19, no. 2, 1965, 186-188

TOPIC TAGS: gamma radiation, nuclear fission, nuclear physics apparatus

ABSTRACT: The delayed gamma radiation from fission fragments was investigated for time intervals of 10 to 70 nano-sec and energy levels from 30 to 500 kev. Approximately, 200 mkg of U235 were used to form a 8-cm target spot of 20 mkg/sq cm density on a Al₂O₃ backing. The target was placed in a vacuum chamber traversed by a neutron beam from VVR-M reactor. A silicon detector was placed at a 58 mm distance above the target to check the fission fragments. Energy resolution of the scintillation spectrometer for Cs137 line was 10%. The fragments heading toward the detector could be absorbed by a movable 4 mg/sq cm aluminum curtain interposed at a distance of 15 mm from the target. The delayed gamma rays were measured when the curtain was open while the background measurements were made with the closed curtain. The results

Card 1/2

L 5069-66
ACC NR: AP5022641

4

of measurements were illustrated by two curves showing the distribution in time of pulse coincidences for both open and closed curtain positions. The average half-life was 28 nsec for heavy fragment groups and 35 nsec for light fragments. The amplitude distribution of fragment pulses without coincidence was also graphically plotted as well as the spectra of delayed gamma rays. A table gives the data on the energy and yield of delayed gamma quanta. The measuring device arrangement is schematically outlined. The authors express their gratitude to A. I. Yegorov (preparation of target), V. F. Afanas'yev (preparation of detector), V. D. Yurchenko and E. B. Rodzevich (general assistance).
Orig. art. has: 3 figures.

ASSOCIATION: None

SUBMITTED: 17Nov64

ENCL: 00

SUB CODE: NP

NO REF SOV: 004

OTHER: 000

Card 2/2 *md*

0206 148

L 27264-65 EWT(m) DYAAP DM

ACCESSION NR: AP5004007

S/0089/65/018/001/0064/0065

AUTHORS: Petrov, G. A.; Kaminker, D. M.; Val'skiy, G. V.; Popeko,
L. A.

TITLE: Angular distribution of gamma quanta from the fission of
U-233, U-235, and Pu-239 by thermal neutrons

SOURCE: Atomnaya energiya, v. 18, no. 1, 1965, 64-65

TOPIC TAGS: thermal neutron fission, uranium fission, plutonium
fission, fission gamma quanta, angular distribution

ABSTRACT: The purpose of the investigation was to measure the angular correlation of the fragments and the gamma rays produced during the fission, and to establish the dependence of the anisotropy of the emitted gamma quanta on the nature of the target nucleus and on the gamma-quantum energy. The work was performed on the VVRM reactor of the Leningradskiy fiziko-tekhnicheskii institut. A diagram of the

Card 1/3

L 27264-65

ACCESSION NR: AP5004007

experimental set-up is shown in Fig. 1 of the enclosure. The experimental procedure and some of the special equipment employed are described briefly. The results show that for U^{233} , U^{235} , and Pu^{239} the values of the anisotropy are nearly equal, with the maximum difference expected between U^{235} and Pu^{239} , and with the experimental data giving a somewhat higher value for the gamma anisotropy in the case of Pu^{239} . It is concluded that higher accuracy is necessary for more definite deductions. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: None

SUBMITTED: 26Feb64

ENCL: 01

SUB CODE: NP

NR REF SOV: 003

OTHER: 002

Card

2/3

L 27264-65

ACCESSION NR: AP5004007

ENCLOSURE: 01

S - Dividing source
D - Semiconductor-
Detectors
P - Low-noise
Preamplifiers
UR-4 Rapid amplifiers
UIS-2 Linear amplifiers
BSS - Rapid scheme of
matching

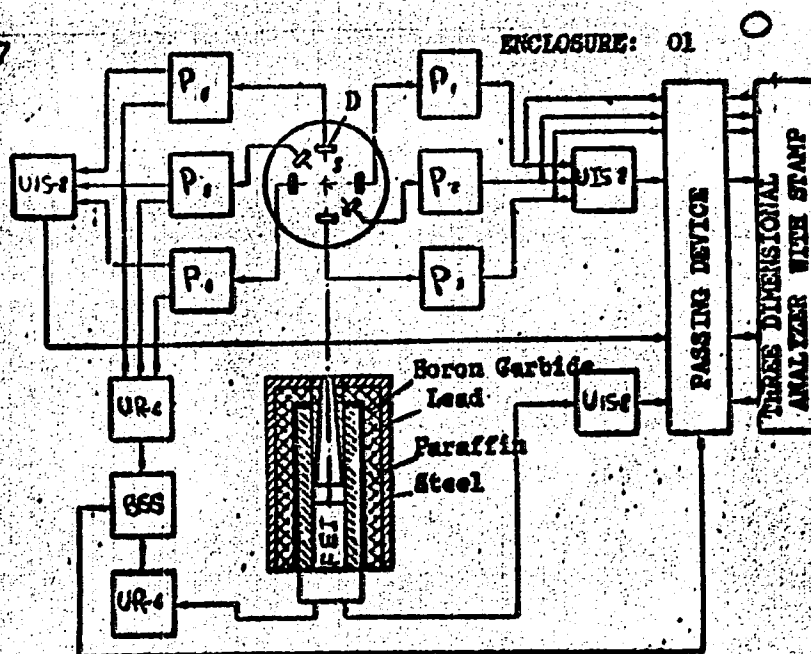


Fig. 1. Diagram of the Experimental Set-up

Card 3/3

VISHINSKIY, L.A.; PETROV, L.A.; SHCHEGLOVA, I.D., red.; MOISEV,
K.F., tekhn. red.

[International electrotechnical vocabulary; Mezhnatsion-
narochnyi elektrotekhnicheskii slovar']. Moskva, Glav. nauch.-
issled. i inzh. nauchno-tekhn. slovar' Fizmatgiz. Group 3:
[Electric traction] Elektricheskaya tiaga. 1963. 144 p.
(MIRA 17:3)

1. International Electrotechnical Commission.

PETROV, S.A.; KAPU LIOV, .P.; KOLLEKOV, .M.; KOLLEKOV, V. V.; 1963.
F.S.

Rapid methods of heating and fritting the hearth bottom of 12-ton-
capacity open-hearth furnaces. Stal' 23 n. 12:611-615. M. 1963.

1. Nizhne-Tapil'skiy metallurgicheskii kombinat i Nizhne-Tapil'skiy
issledovatel'skiy i proyektnyy institut ogneporov.
(Open-hearth furnaces—Maintenance and repair)

ZAKHAROV, A.F.; PETROV, G.A.; NOVIKOV, M.D.; POPOV, L.P.; TORSHILOV, Yu.V.;
GOLOKHMATOV, S.N.; GUSAROV, A.N.; Koval'CHUK, N.P.

Potentialities for increasing labor productivity in the
open-hearth process. Stal' 21 no.6:560-562 Je '61. (MIRA 14:5)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat.
(Open-hearth furnaces—Equipment and supplies)

RUBCHINSKIY, Z.M., kand.tekhn.nauk;- PETROV, G.A., inzh.

First experimental motor-coach train with rheostatic regenerative
braking. Trudy TSNII MPS no.188:4-37 '60. (MIRA 14:2)
(Electric railroads—Brakes) (Electric railroads—Testing)

PETROV, G. A.

168T17

USSR/Engineering - Hydraulics

Jul 50

"Concerning the Theory of the Side Spillway," G. A. Petrov, Dr Tech Sci

"Gidrotekh Stroi" No 7, pp 24-26

Attempts to clarify problem of motion of liquid through side spillway. Proves inapplicability of Marquis postulate on constancy of specific energy value of a flow along entire length of spillway edge. Develops method for solving problem, adequate for approximately calculating a side spillway.

168T17

Petrov, G. A.

Technology

(Movement of a fluid with variation in discharge during circulation). Moskva, Stroizlat, 1951.

9. Monthly List of Russian Accessions, Library of Congress, November 1951, Unclassified.

PETROV, G.A.

Petrov, G.A.

"The Movement of a Liquid
with a Variation of Dis-
charge Along Its Path"

Khar'kov Construction Engineer-
ing Institute

ZABABURIN, I.Z., kand.tekhn.nauk; PETROV, G.A., doktor tekhn.nauk

New method for utilizing certain types of cooling reservoirs.

Elek.sta. 29 no.8:43-45 Ag '58.

(MIRA 11:11)

(Hydroelectric power stations--Water supply)

Author: Prof. S. A. Krasovskiy

Title: Energy Damper with Longitudinal Bottom Slits (Energy Dissipator s sputnikami dnoykh prorezyami)

Source: Izvestiya Akad. Nauk SSSR, Tekhn. Nauch. Ser., 1978, No. 1, pp. 11-12, 11 figs.

Summary: The author describes a new scheme of an energy damper placed at the end of spillways. Its principal part is a sill or diaphragm higher than the surface level of the lower water. Its best position is when the lower surface of the bottom of the damper is at the surface level of the stream at the outlet. Longitudinal and rectangular slits are made in the bottom of the damper through which the stream from the spillway passes before it reaches the free water. A wall is placed at the end and across the damper to maintain the necessary depth. Tests executed in the hydraulic laboratory of the

can Damper with longitudinal Bottom Slits

SVV-99-58-9-2 9

Near a very interesting article by Institute of Constructional Engineering) proved very satisfactory. The author also devised a formula by which the length of the damper for any given spillway can be calculated. There is 1 figure and 1 Soviet reference.

Water-control systems in inland waterways--USSR

and 1.

8(6)

AUTHOR: Petrov, G.A., Doctor of Technical Sciences, Professor

TITLE: Grid Energy Dissipators

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1980, No. 1, pp. 70-71, 1 diagram

ABSTRACT: The author reveals a method for computing grid energy dissipators. The method is based on fundamental hydraulic principles. The dissipators are formed by two lateral rows of teeth parallel to the flow and 1 or 2 perpendicular rows of teeth; they are applicable for energy dissipation of flows up to 30 cu m/sec capacity. According to some laboratory experiments, the optimal thickness of the teeth is 0.05 to 0.1 m and the distance between two neighboring teeth should be 1 to 2 times larger than their thickness. This type of water energy dissipators was applied behind the outlet tubes of hydropower plants in the Donbass. There are 2 diagrams.

Card 1/1

PETROV, G.A., doktor tekhn.nauk

Spreading of a fully submerged axially symmetric jet. Elek.
sta. 33 no.10:37-40 0 '62. (MIRA 1b:1)
(Electric power plants—Water supply)

PETROV, G. A., doktor tekhn. nauk, prof.

Mesh energy dissipators which are triangular in the plane.
Gidr. stroi. 33 no.12:37-39 D '62. (MIRA 16:1)

(Hydraulic structures)

L 8141-66 EWT(m)/ETC/EWG(m)/EWP(t)/EWP(b) IJP(c) RDW/JD/JXT(BF)

ACC NR: AP5025728

SOURCE CODE: UR/0286/65/000/018/0080;J081

AUTHORS: Kal'manson, V. A.; Zlotnikov, G. G.; Vishnevskaya, N. P.; Petrov, G. A.;
Zaytsev, Ye. N.; Golikov, I. G.; Pokrovskiy, I. V.

ORG: none

TITLE: Reading-copying apparatus. Class 42, No. 174810 [announced by Laboratory
for Electromodulation of the All-Union Institute for Scientific and Technical Informa-
tion, AN SSSR (Laboratoriya elektromodelirovaniya vsesoyuznogo instituta nauchnoy i
tekhnicheskoy informatsii AN SSSR)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 80-81

TOPIC TAGS: microreader, microcopying device, selenium copying device

ABSTRACT: This Author Certificate presents a reading-copying apparatus. The device contains an optical system which permits reading and copying of micro-images. To make the device more convenient to use and to improve its performance during selective copying, the device is equipped with a charge-developing electrographic installation (see Fig. 1). The selenium plate of the latter coincides with a transparent screen situated within the depth limits of the sharpness of the objective. A modification of the above device for the complete copying of exposure onto the selenium plate contains a concave mirror.

Card 1/2

UDC: 778.148.2.778.275

L 8141-66

ACC NR: AP5025728

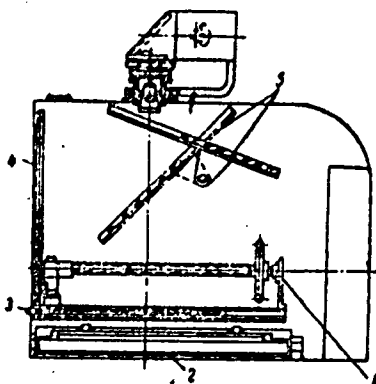


Fig. 1. 1- charging installation; 2- developing installation; 3- selenium plate; 4- transparent screen; 5- mirror

Orig. art. has: 1 figure.

SUB CODE: EC, NP/ SUBM DATE: 22Sep64

Card 2/2pw

PETROV, G.A., kand.tekhn.nauk, dotsent; DEMYANTSEVICH, V.P., kand.tekhn.nauk, dotsent; RYZHIK, Z.M., inzh., red.; ANDREYEV, V.M., prof., otv.red.; GVIRTIS, V.L., tekhn.red.

[Harmless LPI-2 flux for automatic and semiautomatic welding]
Bezvrednyi flius LPI-2 dlia avtomaticheskoi i poluavtomaticheskoi svarki. Leningrad, 1954. 5 p. (Informatsionno-tekhnicheskii listok, no.12 (585)).

(MIRA 14:6)

1. Leningradskiy Dom nauchno-tekhnicheskoy propagandy. 2. Leningradskiy Dom nauchno-tekhnicheskoy propagandy (for Ryzhik).
(Electric welding--Hygienic aspects)
(Flux (Metallurgy))

PETROV, G.A., inzh.; MIKHAYLOV, I.N., inzh.; KLYUCHAREV, A.P., inzh.

Automatic control of thermal processes in open-hearth furnaces.
Mekh.i avtom.proizv. 14 no.10:20-23 O '60. (MIRA 13:10)
(Open-hearth furnaces) (Automatic control)

PETROV, G. A.

met 1206. An Installation for Reclamation of Burned Mold Sand. *Ustani voostanovleniia goreloi formovochnoi zemli.* (Russian.) E. A. Glazman and G. A. Petrov. *Litainos Proizvodstvo*, 1956, no. 5, May 1956, p. 11-14.
A corona discharge separator for reclamation of the reusable portion of burned mold sand. Diagrams, table.

Translation from Referativnaya Zhurnal Metallurgiya, 1957, No. 3, pp. 50-53
SOV 137-48-7-4300

AUTHORS

Khudyakov, N. A., Krivosheina, V. S., Petrov, G. A.,
Vocher, N. A.

TITLE

Open-hearth Procedures With Oxygen-enriched Air (Ofermen-
logii martenovskogo proizvodstva stali s primeneniem kisloro-
da dlya obogashcheniya vozdukhov)

PERIODICAL

Byal. nauchno-tekhn. inform. Ural'skii kombinat chernykh
metallov, 1957, No. 3, pp. 50-53

ABSTRACT

The experience of the Novos-Tazh Metallurgical Kombinat
in using O_2 in its 380-t furnaces is presented. Only magnesite
was used to service the furnaces. Charging was performed in
from 1 hr to 1 hr 20 min. Melt-down time was significantly
reduced. Almost removal of P is facilitated by removal of the
slag without keeping it in the furnace. Slags from heats in
which O_2 is used are characterized by higher basicity. The
formation of the slag is accelerated by higher basicity. The
the O_2 operation of the furnace was being developed, an ex-
pected C % was noted, but all conditions exist to attain a faster
rate of C burn-off. [Mn] in heats with O_2 is somewhat higher

Card 1/2

SOV. 137-58-7-14307

Open-hearth Procedures With Oxygen-enriched Air

than in heats without O_2 . $[P]$ dropped to 0.012% instead of 0.02% in heats without the use of oxygen. The use of O_2 has a favorable effect on $[S]$ although it is the lower, the more rapid the conduct of the heat. The following conclusions are drawn from the experimental heats conducted: use of O_2 increased output per open-hearth furnace by 15.6%. Charging-box capacity should be raised from 1.24 to 1.75 m³. The time required to heat the charge can be reduced to 40 or 50 min. Further increase in output depends upon organizational and technical measures, including an increase in the dimensions of the smelting volume of the furnace.

M. P.

1. The use of oxygen-enriched air in open-hearth furnaces increases the output of the furnaces.

Card 2-2

LITVIN, D.M.; PETROV, G.A.

New 180-type electric discharge separators used for regenerating
burnt molding sands. Biul.tekh.-ekon.inform. no.12:19-20 '58.
(MIRA 11:12)

(Separators (Machines))

15(2)
 SOV/131-59-12-5/15
 AUTHORS: 1) Bron, V. A., Kneronhavin, L.B., 2) Petrov, G. A. Vydrina, Zh. A.,
 3) Uzberg, A. I.
 TITLE: Use of Metallurgical Ground Magnesite With an Increased Calcium
 Oxide Content in Open-hearth Furnaces
 PERIODICAL: Ogneupory, 1959, Nr 12, pp 553-560 (USSR)
 ABSTRACT: At first data and suggestions by Berezhnyy are mentioned and
 in table 1 the chemical composition of powders used in the USA
 are indicated. The present paper supplies experimental results
 of ground magnesite with increased calcium oxide content (of
 9.0 to 14.6%). The following researchers participated in the
 investigation under review: S. N. Galakhmatov, A. S. Poz-
 dnyakov, P. N. Simonenko, T. F. Golikova, E. O. Karnayev,
 A. V. Chernobrovkin (Ref 1). The chemical composition and
 graduation of grain sizes of ground magnesite may be seen from
 table 2, on the strength of which the powders of the first
 set may be designated coarse-grained (of the type MPK) and
 the rest fine-grained (of the type MPM). The amount of experi-
 mental powder used for lining the furnace bottoms and repair

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with an Increased Calcium Oxide C

of furnace repair is given in table 3. Table 4 shows the chemical composition of the repair. The petrographic investigation of the repair is given by T. F. Raychenko (Ref. 2). The chemical composition of the experimental powder is given in table 5. The microstructure of the hot repairs of furnaces is given in table 6. The comparative stability of furnace bottom and the comparative stability of furnace bottom with the experimental powder and ground magnesite is given in table 7. The chemical composition of furnace bottom material is given in figures 1 to 4 microstructures of furnace bottom are shown. In conclusion the authors state that the use of increased calcium oxide content (up to 10%) are not of great regard to stability to those of repair of the MPK and MPK in furnace repair according to the results of the comparison of physical and chemical composition of the repair of open-hearth furnaces showed that the variation of the CaO content within 4-5 up to 1.1-1.2% does not exert a significant influence on these processes. Thus it is possible to use both kinds of powders in open-hearth furnaces. There are 10 references, 3 of which

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are Soviet.

ASSOCIATION: 1) Yuzhno-Ukrainskii gosudarstvennyi (Southern Institute of Research
tories) 2) "Magnezit" (Magnesite) - Tagil Metallurgical Plant
"Magnezit" - Tagil Metallurgical Plant

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AUTHORS: Petrov, G. A., Mikhaylov, I. N., Klyucharev, A. I., Engineer

TITLE: Automated Heating of Open-Hearth Furnace

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, 1969, No. 10, pp. 21-24

TEXT: The article describes in detail the automatic heat control system of a 380-ton open-hearth furnace at Nizhne-Tagil'skiy metallurgicheskiy kombinat (Nizhniy Tagil Metallurgical Combine). The system has been developed by Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy teplotekhniki (All-Union Scientific Research Institute of Metallurgical Heat Engineering) in cooperation with the institute "Uralsmetallurgavtomatika" and the Nizhniy Tagil Combine. The furnace (as all of the Combine) is laid of basic refractories, it works in scrap-ore process with about 65% liquid iron, burns mixed coke and blast furnace gas, and uses oxygen for boosting; gas is carburated by coal tar during the heating and the finishing periods. The automatic and interlocking control units control the combustion, the operating pressure of the furnace, they reverse the flame and regulate the temperature of the checker work tops. The article includes a diagram of the control system (page 21). The main part of the combustion control unit is